```
AN
     2003:836651 CAPLUS
DN
     139:325043
    A 1,1,1,3,3-pentachloropropane process purge stream concentration using a
TI
     secondary refluxed evaporator and secondary product recovery
     Wilson, Richard L.; Dawkins, John L.; Klausmeyer, Rodney L.; Weller, James
IN
     Vulcan Chemicals Division of Vulcan Materials Company, USA
PA
    U.S. Pat. Appl. Publ., 15 pp.
SO
     CODEN: USXXCO
DТ
     Patent
    English
LA
FAN.CNT 1
                     KIND DATE
                                         APPLICATION NO.
    PATENT NO.
                       ----
                              ------
                                          ______
                               20031023 US 2002-125141
    US 2003199716
                        A1
                                                               20020417
PΙ
    US 6720466
                        B2
                               20040413
                        A1
                               20031030
                                          WO 2003-US4212
     WO 2003089391
         W: AE, AG, AL, AU, BA, BB, BG, BR, BZ, CA, CN, CR, CU, CZ, DM, DZ,
            EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT,
            LV, MA, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SK, TT, UA, UZ, VN,
            YU, ZA
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
            FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                               20020417
PRAI US 2002-125141
                        Α
    CASREACT 139:325043
os
    A process for economically producing 1,1,1,3,3-pentachloropropane from the
AΒ
     addition reaction of vinyl chloride with tetrachloromethane under conditions
     which preserve the activity of the catalyst is described where a two-stage
     distillation process is employed. In the two-stage process, the size of the
     equipment, temperature, and vacuum are varied; a process flow diagram is
    presented.
RE.CNT 3
             THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
L12
     2003:98042 CAPLUS
AN
DN
     138:139165
    Methods and materials for the preparation and purification of halogenated
ΤI
    hydrocarbons such as 1,1,1,3,3-pentafluoropropane
    Owens, Stephen; Jackson, Andrew; Sharma, Vimal; Cohn, Mitchel; Qian, John
IN
     Cheng-Ping; Sacarias, Julia Ann; Iikubo, Yuichi
PA
    U.S. Pat. Appl. Publ., 6 pp., Cont. of U.S. Ser. No. 909,695, abandoned.
SO
    CODEN: USXXCO
DT
    Patent
LA
    English
FAN.CNT 1
                      KIND DATE
                                         APPLICATION NO.
                                                               DATE
    PATENT NO.
                       ----
                               -----
                                          _____
                                        US 2002-133551
                                                                 20020426
    US 2003028057
                        A1
                               20030206
                        В1
PRAI US 2001-909695
                               20010720
    Methods and materials are described for the production and purification of
    halogenated compds. and intermediates in the production of
     1,1,1,3,3-pentafluoropropane which include: (1) reacting carbon
     tetrachloride with vinyl chloride to produce 1,1,1,3,3-pentachloropropane:
     (2) dehydrochlorinating the 1,1,1,3,3-pentachloropropane with a Lewis ac. d
     catalyst to produce 1,1,3,3-tetrachloropropene; (3) fluorinating the
     1,1,3,3-tetrachloropropene to produce 1-chloro-3,3,3-trifluoropropene; (4)
    fluorinating the 1-chloro-3,3,3-trifluoropropene to produce a product
    mixture containing 1,1,1,3,3-pentafluoropropane; and (5) separating
```

L12 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

1,1,1,3,3-pentafluoropropane from byproducts. ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN L12 2002:977770 CAPLUS AN DN 138:39028 Water-enhanced production of 1,1,1,3,3-pentachloropropane from the ΤI addition reaction of carbon tetrachloride with vinyl chloride Branam, Lloyd B. IN PA Vulcan Chemicals, USA SO PCT Int. Appl., 18 pp. CODEN: PIXXD2 DT Patent English LA FAN.CNT 1 KIND DATE APPLICATION NO. DATE PATENT NO. _ _ _ _ _____ _______ A2 20021227 WO 2002-US18253 20020612 PΙ WO 2002102750 WO 2002102750 A3 20030327 W: JP, MX RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR US 2001-880010 20010614 US 6500995 B2 20021231 20030109 US 2003009066 **A1** 20040317 EP 2002-739794 20020612 EP 1397332 A2 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR 20041007 JP 2003-505295 20020612 JP 2004530712 T2 PRAI US 2001-880010 Α 20010614 WO 2002-US18253 W 20020612 CASREACT 138:39028 OS 1,1,1,3,3-Pentachloropropane is prepared in increased yield by the addition AB reaction of carbon tetrachloride and vinyl chloride, where water is added in an amount sufficient to increase the rate of the reaction. ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN T.12 2001:809122 CAPLUS AN 135:346135 DN Addition-reaction process for the manufacture of 1,1,1,3,3-TΙ pentachloropropane from tetrachloromethane and vinyl chloride Wilson, Richard; Klausmeyer, Rodney; Branam, Lloyd; Burrows, Derrek; IN Strathe, Jim; Dawkins, John; Lichtenstein, Theo; Weller, Joseph; Tummons, John PA Vulcan Materials Company, USA SO U.S., 8 pp. CODEN: USXXAM דת Patent LA English FAN.CNT 1 APPLICATION NO. PATENT NO. KIND DATE DATE -----_ - - -_____ _____ US 2000-671993 20000929 В1 20011106 PΤ US 6313360 20020411 WO 2000-US32454 20001213 WO 2002028806 **A**1 W: JP, MX RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR 20030723 EP 2000-989209 20001213 EP 1328496 A1 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR JP 2004524272 T2 20040812 JP 2002-532195 20001213 20000929 PRAI US 2000-671993 Α 20001213 W WO 2000-US32454 The title process comprises: (a) producing a product mixture in a reactor by

reacting carbon tetrachloride and vinyl chloride in the presence of a catalyst mixture comprising an organophosphate (e.g., tri-Bu phosphate)

AΒ

solvent, iron metal, and ferric chloride to produce 1,1,1,3,3pentachloropropane; (b) subjecting the 1,1,1,3,3-pentachloropropane-containing
product mixture from step (a) to evaporation such that a fraction enriched in
1,1,3,3-pentachloropropane is separated from the product mixture and a
bottoms

fraction results which comprises the iron metal/ferric chloride catalyst components and heavy-end byproducts; and (c) recycling at least a portion of the bottoms fraction from step (b) to the reactor.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:573245 CAPLUS

DN 135:139001

TI Manufacture of 1,1,1,3,3-pentachloropropane with high yield for mass production

IN Ishihara, Akira; Okamoto, Satoru; Hibino, Yasuo

PA Central Glass Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2001213820	A2	20010807	JP 2000-22426	20000131
PRAI	JP 2000-22426		20000131		

OS MARPAT 135:139001

1,1,1,3,3-Pentachloropropane (I), useful for manufacturing pentafluoropropane,
is manufactured by reacting tetrachloromethane (II) and vinyl chloride (III) in
the presence of Fe and (RO)3PON [R = H, (un)substituted alkyl,
 (un)substituted cycloalkyl, aryl; n = 0, 1]. Thus, II and III were
reacted in the presence of reduced iron and tri-Et phosphate to give I at
yield 47.6%.

(FILE 'HOME' ENTERED AT 16:27:25 ON 09 FEB 2005)

L1 L2 L3	FILE 'REGISTRY' ENTERED AT 16:27:46 ON 09 FEB 2005 1 S CARBON TETRACHLORIDE/CN 1 S VINYL CHLORIDE/CN 1 S TRIBUTYL PHOSPHATE/CN
L4	FILE 'CAPLUS, MARPAT' ENTERED AT 16:29:40 ON 09 FEB 2005
	16 S L4 AND L3
L6	16 DUP REM L5 (0 DUPLICATES REMOVED)
ПО	10 DOI REN ES (O DOI ELEMES RENOVED)
	FILE 'CAPLUS' ENTERED AT 16:30:30 ON 09 FEB 2005
L7	1175 S L1 AND L2
L8	16 S L7 AND L3
L9	16 DUP REM L8 (0 DUPLICATES REMOVED)
	,
	FILE 'REGISTRY' ENTERED AT 16:31:08 ON 09 FEB 2005
L10	1 S 1,1,1,3,3-PENTACHLOROPROPANE/CN
	FILE 'CAPLUS' ENTERED AT 16:31:35 ON 09 FEB 2005
L11	16 S L9
L12	5 S L9 AND L10